

10718031_CLS.txt

**Most Frequently Occurring Classifications of Patents Returned
From A Search of 10718031 on July 27, 2006**

Original Classifications

30	324/754
7	324/762
6	324/758
3	324/757
2	216/11
2	250/306
2	257/781
2	324/716
2	324/756
2	324/761
2	356/400
2	438/107
2	438/14
2	438/17
2	451/527

Cross-Reference Classifications

16	324/754
9	324/72.5
9	324/762
7	324/758
6	324/158.1
6	324/73.1
4	324/765
4	439/482
4	977/854
4	977/874
3	29/825
3	216/2
3	257/E21.512
3	324/761
3	356/401
3	438/15
3	977/860
3	977/873
2	29/25.35
2	29/827
2	29/846
2	134/42
2	257/E21.313
2	257/E21.508
2	257/E21.525
2	257/E23.02
2	257/E23.021
2	257/E23.06
2	324/755
2	374/7
2	438/125
2	438/18
2	438/611
2	438/614
2	451/548
2	451/552
2	977/849
2	977/879

Combined Classifications

46	324/754
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16 324/762
13 324/758
9 324/72.5
7 324/158.1
6 324/73.1
5 324/761
5 324/765
4 324/757
4 439/482
4 977/854
4 977/874
3 29/825
3 216/2
3 250/306
3 257/E21.512
3 356/401
3 438/14
3 438/15
3 451/527
3 977/860
3 977/873
2 29/25.35
2 29/827
2 29/846
2 134/42
2 216/11
2 257/781
2 257/E21.313
2 257/E21.508
2 257/E21.525
2 257/E23.02
2 257/E23.021
2 257/E23.06
2 324/537
2 324/716
2 324/755
2 324/756
2 324/760
2 356/400
2 365/164
2 369/126
2 374/7
2 438/107
2 438/125
2 438/17
2 438/18
2 438/611
2 438/614
2 451/548
2 451/552
2 977/849
2 977/879

10718031_CLSTITLES.txt
Titles of Most Frequently Occurring Classifications of Patents Returned
From A Search of 10718031 on July 27, 2006

- 46 324/754 (30 OR, 16 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..with probe elements
- 16 324/762 (7 OR, 9 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..with probe elements
324/762 ...Cantilever
- 13 324/758 (6 OR, 7 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..with probe elements
324/758 ...Probe alignment or positioning
- 9 324/72.5 (0 OR, 9 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/72 TESTING POTENTIAL IN SPECIFIC ENVIRONMENT
(E.G., LIGHTNING STROKE)
324/72.5 .Voltage probe
- 7 324/158.1 (1 OR, 6 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/158.1 MISCELLANEOUS
- 6 324/73.1 (0 OR, 6 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/73.1 PLURAL, AUTOMATICALLY SEQUENTIAL TESTS
- 5 324/761 (2 OR, 3 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..with probe elements
324/761 ...Pin
- 5 324/765 (1 OR, 4 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/765 ..Test of semiconductor device
- 4 324/757 (3 OR, 1 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..with probe elements
324/757 ...Probe contact enhancement

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- 4 439/482 (0 OR, 4 XR)
Class 439 : ELECTRICAL CONNECTORS
439/476.1 INCLUDING HANDLE OR DISTINCT MANIPULATING MEANS
- 439/481 .Randomly manipulated implement
439/482 ..Test probe
- 4 977/854 (0 OR, 4 XR)
Could not find class title.
Could not find subclass title.
- 4 977/874 (0 OR, 4 XR)
Could not find class title.
Could not find subclass title.
- 3 29/825 (0 OR, 3 XR)
Class 029 : METAL WORKING
29/592 METHOD OF MECHANICAL MANUFACTURE
29/592.1 .Electrical device making
29/825 ..Conductor or circuit manufacturing
- 3 216/2 (0 OR, 3 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/2 ETCHING OF SEMICONDUCTOR MATERIAL TO PRODUCE AN ARTICLE HAVING A NONELECTRICAL FUNCTION
- 3 250/306 (2 OR, 1 XR)
Class 250 : RADIANT ENERGY
250/306 INSPECTION OF SOLIDS OR LIQUIDS BY CHARGED PARTICLES
- 3 257/E21.512 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES OR OF PARTS THEREOF (EPO)
- depletion
257/E21.002 .Manufacture or treatment of semiconductor device (EPO)
257/E21.04 ..Device having at least one potential-jump barrier or surface barrier, e.g., PN junction, depletion layer, carrier concentration layer (EPO)
- treatment
257/E21.499 ...Assembling semiconductor devices, e.g., packaging, including mounting, encapsulating, or treatment of packaged semiconductor (EPO)
- or
257/E21.506Attaching or detaching leads or other conductive members, to be used for carrying current to or from device in operation (EPO)
- 257/E21.509Involving soldering or alloying process, e.g., soldering wires (EPO)
- 257/E21.511Mounting on insulating member provided with metallic leads, e.g., flip-chip mounting, conductive die mounting (EPO)
- 257/E21.512Right-up bonding (EPO)
- 3 356/401 (0 OR, 3 XR)
Class 356 : OPTICS: MEASURING AND TESTING
356/399 BY ALIGNMENT IN LATERAL DIRECTION

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356/401 .with registration indicia (e.g., scale)

- 3 438/14 (2 OR, 1 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/14 WITH MEASURING OR TESTING
- 3 438/15 (0 OR, 3 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/14 WITH MEASURING OR TESTING
438/15 .Packaging (e.g., with mounting, encapsulating,
etc.) or treatment of packaged semiconductor
- 3 451/527 (2 OR, 1 XR)
Class 451 : ABRADING
451/526 FLEXIBLE-MEMBER TOOL, PER SE
451/527 .Interrupted or composite work face (e.g.,
cracked, nonplanar, etc.)
- 3 977/860 (0 OR, 3 XR)
Could not find class title.
Could not find subclass title.
- 3 977/873 (0 OR, 3 XR)
Could not find class title.
Could not find subclass title.
- 2 29/25.35 (0 OR, 2 XR)
Class 029 : METAL WORKING
29/25.35 PIEZOELECTRIC DEVICE MAKING
- 2 29/827 (0 OR, 2 XR)
Class 029 : METAL WORKING
29/592 METHOD OF MECHANICAL MANUFACTURE
29/592.1 .Electrical device making
29/825 ..Conductor or circuit manufacturing
29/827 ...Beam lead frame or beam lead device
- 2 29/846 (0 OR, 2 XR)
Class 029 : METAL WORKING
29/592 METHOD OF MECHANICAL MANUFACTURE
29/592.1 .Electrical device making
29/825 ..Conductor or circuit manufacturing
29/829 ...On flat or curved insulated base, e.g.,
printed circuit, etc.
29/846Manufacturing circuit on or in base
- 2 134/42 (0 OR, 2 XR)
Class 134 : CLEANING AND LIQUID CONTACT WITH SOLIDS
134/42 .Miscellaneous
- 2 216/11 (2 OR, 0 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/11 FORMING OR TREATING AN ARTICLE WHOSE FINAL
CONFIGURATION HAS A PROJECTION
- 2 257/781 (2 OR, 0 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/734 COMBINED WITH ELECTRICAL CONTACT OR LEAD
257/780 .Ball or nail head type contact, lead, or bond
257/781 ..Layered contact, lead or bond

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2 257/E21.313 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion

layer, carrier concentration layer (EPO)

or without

257/E21.085 ...Device having semiconductor body comprising
Group IV elements or Group III-V compounds with

material on
material, or

257/E21.211Treatment of semiconductor body using
process other than deposition of semiconductor

a substrate, diffusion or alloying of impurity

radiation treatment (EPO)

cutting

257/E21.214To change their surface-physical
characteristics or shape, e.g., etching, polishing,

(EPO)

Layers on

257/E21.294Deposition/post-treatment of
noninsulating, e.g., conductive - or resistive -

insulating layers (EPO)

257/E21.3Post treatment (EPO)

257/E21.305Physical or chemical etching of layer,
e.g., to produce a patterned layer from pre-deposited
extensive layer (EPO)

257/E21.308By chemical means only (EPO)

257/E21.31By vapor etching only (EPO)

257/E21.313Pre- or post-treatment, e.g.,
anti-corrosion process (EPO)

2 257/E21.508 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

PARTS THEREOF (EPO)

257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion

layer, carrier concentration layer (EPO)

treatment

257/E21.499 ...Assembling semiconductor devices, e.g.,
packaging , including mounting, encapsulating, or

of packaged semiconductor (EPO)

or

257/E21.506Attaching or detaching leads or other
conductive members, to be used for carrying current to

from device in operation (EPO)

e.g.,

257/E21.507Formation of contacts to semiconductor by
use of metal layers separated by insulating layers,

(EPO)

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self-aligned contacts to source/drain or emitter/base

- 257/E21.508Forming solder bumps (EPO)
- 2 257/E21.525 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.515Involving use of mechanical auxiliary part without use of alloying or soldering process, e.g., pressure contacts (EPO)
- 257/E21.521 .Testing or measuring during manufacture or treatment or reliability measurement, i.e., testing of parts followed by no processing which modifies parts as such (EPO)
- 257/E21.525 ..Procedures, i.e., sequence of activities consisting of plurality of measurement and correction, marking or sorting steps (EPO)
- 2 257/E23.02 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
257/E23.012 ..Consisting of lead-in layers inseparably applied to semiconductor body (EPO)
257/E23.019 ...Consisting of layered constructions comprising conductive layers and insulating layers, e.g., planar contacts (EPO)
- 257/E23.02Bonding areas, e.g., pads (EPO)
- 2 257/E23.021 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
257/E23.012 ..Consisting of lead-in layers inseparably applied to semiconductor body (EPO)
257/E23.019 ...Consisting of layered constructions comprising conductive layers and insulating layers, e.g., planar contacts (EPO)
- 257/E23.021Bump or ball contacts (EPO)
- 2 257/E23.06 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
257/E23.023 ..Consisting of soldered or bonded constructions (EPO)
257/E23.06 ...Leads, i.e., metallizations or lead frames on insulating substrates, e.g., chip carriers (EPO)
- 2 324/537 (1 OR, 1 XR)
Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF

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ELECTRIC COMPONENTS

324/537 .of individual circuit component or element

2 324/716 (2 OR, 0 XR)

Class 324 : ELECTRICITY: MEASURING AND TESTING
324/600 IMPEDANCE, ADMITTANCE OR OTHER QUANTITIES
REPRESENTATIVE OF ELECTRICAL STIMULUS/RESPONSE
RELATIONSHIPS
324/649 .Lumped type parameters
324/691 ..Using resistance or conductance measurement

324/713 ...with voltage or current signal evaluation
324/715Including a particular probing technique
(e.g., four point probe)
324/716To determine dimension (e.g., distance or
thickness)

2 324/755 (0 OR, 2 XR)

Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..With probe elements
324/755 ...Internal of or on support for device under
test (DUT)

2 324/756 (2 OR, 0 XR)

Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..With probe elements
324/756 ...Contact confirmation

2 324/760 (1 OR, 1 XR)

Class 324 : ELECTRICITY: MEASURING AND TESTING
324/500 FAULT DETECTING IN ELECTRIC CIRCUITS AND OF
ELECTRIC COMPONENTS
324/537 .of individual circuit component or element
324/754 ..With probe elements
324/760 ...With temperature control

2 356/400 (2 OR, 0 XR)

Class 356 : OPTICS: MEASURING AND TESTING
356/399 BY ALIGNMENT IN LATERAL DIRECTION
356/400 .with light detector (e.g., photocell)

2 365/164 (1 OR, 1 XR)

Class 365 : STATIC INFORMATION STORAGE AND RETRIEVAL
365/129 SYSTEMS USING PARTICULAR ELEMENT
365/164 .Electrical contacts

2 369/126 (1 OR, 1 XR)

Class 369 : DYNAMIC INFORMATION STORAGE OR RETRIEVAL
369/99 SPECIFIC DETAIL OF INFORMATION HANDLING PORTION
OF SYSTEM
369/126 .Electrical modification or sensing of storage
medium (e.g., capacitive, resistive, electrostatic
charge)

2 374/7 (0 OR, 2 XR)

Class 374 : THERMAL MEASURING AND TESTING

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374/6 DISTANCE OR ANGLE
374/7 .Thickness, erosion, or deposition

2 438/107 (2 OR, 0 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING,
ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR
438/107 .Assembly of plural semiconductive substrates
each possessing electrical device

2 438/125 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING,
ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR
438/125 .Insulative housing or support

2 438/17 (2 OR, 0 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/14 WITH MEASURING OR TESTING
438/17 .Electrical characteristic sensed

2 438/18 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/14 WITH MEASURING OR TESTING
438/17 .Electrical characteristic sensed
438/18 ..Utilizing integral test element

2 438/611 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive
material
438/611 ..Beam lead formation

2 438/614 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive
material
438/612 ..Forming solder contact or bonding pad
438/613 ...Bump electrode
438/614Plural conductive layers

2 451/548 (0 OR, 2 XR)
Class 451 : ABRADING
451/540 RIGID TOOL
451/548 .Rotary disk

2 451/552 (0 OR, 2 XR)
Class 451 : ABRADING
451/540 RIGID TOOL
451/552 .Stationary

2 977/849 (0 OR, 2 XR)
Could not find class title.

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Could not find subclass title.

2 977/879 (0 OR, 2 XR)
Could not find class title.
Could not find subclass title.